<u>**Amendments to the Claims:**</u>

This listing of claims replaces all prior versions and listings of claims in the application.

<u>**Listing of Claims:**</u>

Claims 1-33 (*Canceled*).

Claim 34 (*Currently Amended*): An image processing system comprising:

an image providing apparatus which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in a predetermined region identified by a document information among the plurality of regions and ~~providing~~ <u>provides</u> said image data, in which said digital watermark is embedded based on said location information <u>wherein said document information shows an identification of a document classification</u>; and

an image utilizing apparatus which extracts said digital watermark from said image data provided by said image providing apparatus based on said location information, and verifies whether <u>any</u> of said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 35. (*Currently Amended*) An image processing system comprising:

an image providing apparatus which recognizes a format for indicating a plurality of regions in image data and provides said image data in which a digital watermark is embedded in a predetermined region identified by a document information among the plurality of regions

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based on said format <u>wherein said document information shows an identification of a document</u> <u>classification</u>; and

an image utilizing apparatus which recognizes said format of said image data, extracts said digital watermark from said regions based on said format, and verifies whether said image data in said predetermined region in said image data, in which said digital watermark is embedded, has been tampered.

Claim 36. (*Previously Presented*) An image processing system as claimed in claim 34 or 35, wherein said image providing apparatus provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data.

Claim 37. (*Previously Presented*) An image processing system as claimed in claim 36, wherein said image providing apparatus provides said image data in which a different kind of said digital watermark is embedded according to an image quality in each region where said digital watermark is embedded.

Claim 38. (*Previously Presented*) An image processing system as claimed in claim 34, wherein:

said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper; and

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said image utilizing apparatus extracts said digital watermark with said message digest from said image data based on said location information, and generates a corresponding message digest using said specific information in said provided image data, and detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

Claim 39. (*Previously Presented*) An image processing system as claimed in claim 34, wherein:

said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information; and

said image utilizing apparatus extracts said digital watermark with said message digest from said image data based on said location information, generates a corresponding message digest using said specific information in said provided image data, and detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

Claim 40. (*Original*) An image processing system as claimed in claim 39, wherein said region for embedding said message digest corresponding to said specific information is

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independent of said region for displaying said specific information necessary for detecting said tamper.

Claim 41. (*Previously Presented*) An image processing system as claimed in claim 34, wherein:

said location information is registered in both of said image providing apparatus and said image utilizing apparatus;

said image providing apparatus embeds said digital watermark in said image data based on said registered location information; and

said image utilizing apparatus extracts said digital watermark from said image data based on said registered location information.

Claim 42. (*Previously Presented*) An image processing system as claimed in claim 34, wherein:

said image providing apparatus transfers said location information to said image utilizing apparatus;

said image providing apparatus embeds said digital watermark in said image data based on said location information to be transferred; and

said image utilizing apparatus extracts said digital watermark from said image data based on said location information transferred from said image providing apparatus.

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Claim 43. (*Currently Amended*) An image providing apparatus comprising:

a location defining means which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in a predetermined region identified by a document information among the plurality of regions in said image data <u>wherein said document information shows an identification of a document classification</u>; and

a providing means which provides said image data in which said digital watermark is embedded based on said location information.

Claim 44. (*Currently Amended*) An image providing apparatus comprising:

a format recognizing means which recognizes a format for indicating a plurality of regions in image data; and

a providing means which provides said image data in which a digital watermark is embedded in a predetermined region identified by a document information among the plurality of regions based on said format <u>wherein said document information shows an identification of a document classification</u>.

Claim 45. (*Previously Presented*) An image providing apparatus as claimed in claim 43 or 44,

wherein said providing means provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data.

Claim 46. (*Previously Presented*) An image providing apparatus as claimed in claim 45, wherein said providing means provides said image data in which a different kind of said digital watermark is embedded according to an image quality in each region where said digital watermark is embedded.

Claim 47. (*Original*) An image providing apparatus as claimed in claim 43, wherein said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information.

Claim 48. (*Original*) An image providing apparatus as claimed in claim 47, wherein said region for embedding said message digest corresponding to said specific information is independent of said region for displaying said specific information necessary for detecting said tamper.

Claim 49. (*Previously Presented*) An image providing apparatus as claimed in claim 43, further comprising:

an image utilizing apparatus that includes:

an inputting means which inputs said image data;

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an extracting means which extracts said digital watermark from said image data based on said location information; and

a verifying means which verifies whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 50. (*Previously Presented*) An image providing apparatus as claimed in claim 44, further comprising:

an image utilizing apparatus that includes:

an inputting means which inputs said image data;

an extracting means which extracts said digital watermark from said predetermined region based on said format; and

a verifying means which verifies whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 51. (*Previously Presented*) An image utilizing apparatus as claimed in claim 49, further comprising a generating means which generates a corresponding message digest using said specific information in said input image data, and wherein:

said extracting means which extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying means which detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

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Claim 52. (*Currently Amended*) A recording medium storing a program to be executed by a computer, said program comprising:

a location defining module which defines a location information indicating a plurality of regions in image data for embedding a digital watermark in a predetermined region identified by a document information among the plurality of regions in said image data wherein said document information shows an identification of a document classification; and

a providing module which provides said image data in which said digital watermark is embedded based on said location information.

Claim 53. (*Currently Amended*) A recording medium storing a program to be executed by a computer, said program comprising:

a format recognizing module which recognizes a format indicating a plurality of regions in image data; and

a providing module which provides said image data in which a digital watermark is embedded in a predetermined region identified by a document information among the plurality of regions based on said format wherein said document information shows an identification of a document classification.

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Claim 54. (*Previously Presented*) A recording medium as claimed in claim 52 or 53, wherein said providing module provides said image data in which a different kind of said digital watermark is embedded in a different region in said image data.

Claim 55. (*Previously Presented*) A recording medium as claimed in claim 54, wherein said providing module provides said image data in which a different kind of said digital watermark is embedded according to an image quality in each region where said digital watermark is embedded.

Claim 56. (*Original*) A recording medium as claimed in claim 52, wherein said location information for embedding a digital watermark includes a location information of a region for displaying a specific information necessary for detecting a tamper and a location information of a region for embedding a message digest corresponding to said specific information.

Claim 57. (*Original*) A recording medium as claimed in claim 56, wherein said region for embedding said message digest corresponding to said specific information is independent of said region for displaying said specific information necessary for detecting said tamper.

Claim 58. (*Previously Presented*) A recording medium as claimed in claim 52, said program further comprising:

an inputting module which inputs said image data;

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an extracting module which extracts said digital watermark from said image data based on said location information; and

a verifying module which verifies whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 59. (*Previously Presented*) A recording medium as claimed in claim 53, said program further comprising:

an inputting module which inputs said image data;

an extracting module which extracts said digital watermark from said predetermined region based on said format; and

a verifying module which verifies whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 60. (*Previously Presented*) A recording medium as claimed in claim 58, further comprising a generating module which generates a corresponding message digest using said specific information in said input image data, and wherein:

said extracting module which extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying module which detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

Claim 61. (*Currently Amended*) An image verifying method comprising:

inputting image data in which a location information indicates a plurality of regions in said image data for embedding a digital watermark in a predetermined region identified by a document information among said plurality of regions in said image data wherein said document information shows an identification of a document classification;

extracting said digital watermark from said image data based on said location information; and

verifying whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 62. (*Currently Amended*) An image verifying method comprising:

inputting image data;

recognizing said format of said image data, said format indicating a plurality of regions in said image data for embedding a digital watermark in a predetermined region identified by a document information a desired region among the plurality of regions wherein said document information shows an identification of a document classification;

extracting said digital watermark from said predetermined region based on said format; and

verifying whether said image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

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Claim 63. (*Previously Presented*) An image verifying method as claimed in claim 61, further comprising generating a corresponding message digest using said specific information in said input image data, and wherein:

said extracting said digital watermark extracts said digital watermark with said message digest from said image data based on said location information; and

said verifying tampering detects tampering with said image data by comparing said extracted message digest with said corresponding generated message digest.

Claim 64. (*Previously Presented*) An image processing system as claimed in claim 34, wherein said digital watermark includes a digital watermark information that is extractable by using a watermark key that includes an authentication information which authenticates said image data provided by a valid provider, and said watermark key of said image data, and wherein

said image utilizing apparatus which extracts said digital watermark information from said image data provided by said image providing apparatus using said watermark key provided by said image providing apparatus, verifies whether said watermark key has been tampered or not using said authentication information in said watermark key, verifies whether said image data has been tampered or not using said verified watermark key, and displays said verified image data.

Claim 65. (*Previously Presented*) An image processing system as claimed in claim 35, wherein said digital watermark includes a digital watermark information that is extractable by

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using a watermark key that includes an authentication information which authenticates said image data provided by a valid provider, and said watermark key of said image data, and wherein

said image utilizing apparatus which extracts said digital watermark information from said image data provided by said image providing apparatus using said watermark key provided by said image providing apparatus, verifies whether said watermark key has been tampered or not using said authentication information in said watermark key, verifies whether said image data has been tampered or not using said verified watermark key, and displays said verified image data.

Claim 66. (*Previously Presented*) The image processing system according to claim 34, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 67. (*Previously Presented*) The image processing system according to claim 66, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 68. (*Previously Presented*) The image processing system according to claim 35, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 69. (*Previously Presented*) The image processing system according to claim 68, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

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Claim 70. (*Previously Presented*) The image providing apparatus according to claim 43, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 71. (*Previously Presented*) The image providing apparatus according to claim 70, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 72. (*Previously Presented*) The image providing apparatus according to claim 44, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 73. (*Previously Presented*) The image providing apparatus according to claim 72, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 74. (*Previously Presented*) The image utilizing apparatus according to claim 49, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 75. (*Previously Presented*) The image utilizing apparatus according to claim 74, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 76. (*Previously Presented*) The image providing apparatus according to claim 50, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 77. (*Previously Presented*) The image providing apparatus according to claim 76, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 78. (*Previously Presented*) The recording medium according to claim 52, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 79. (*Previously Presented*) The recording medium according to claim 78, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 80. (*Previously Presented*) The recording medium according to claim 53, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 81. (*Previously Presented*) The recording medium according to claim 80, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

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Claim 82. (*Previously Presented*) The recording medium according to claim 58, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 83. (*Previously Presented*) The recording medium according to claim 82, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 84. (*Previously Presented*) The recording medium according to claim 59, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 85. (*Previously Presented*) The recording medium according to claim 84, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 86. (*Previously Presented*) The image verifying method according to claim 61, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 87. (*Previously Presented*) The image verifying method according to claim 86, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

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Claim 88. (*Previously Presented*) The image verifying method according to claim 62, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 89. (*Previously Presented*) The image verifying method according to claim 88, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 90. (*Previously Presented*) The image processing system according to claim 64, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 91. (*Previously Presented*) The image processing according to claim 90, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 92. (*Previously Presented*) The image processing system according to claim 65, wherein a density of said digital watermark is adjusted to a quality of said image data.

Claim 93. (*Previously Presented*) The image processing according to claim 92, wherein a data amount of said digital watermark for a character is smaller than one for another type of information in said image data.

Claim 94. (*Previously Presented*) The image processing system according to claim 34, wherein said predetermined region includes at least one of character information or image information.

Claim 95. (*Previously Presented*) The image processing system according to claim 94, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 96. (*Previously Presented*) The image processing system according to claim 35, wherein said predetermined region includes at least one of character information or image information.

Claim 97. (*Previously Presented*) The image processing system according to claim 96, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 98. (*Previously Presented*) The image providing apparatus according to claim 43, wherein said predetermined region includes at least one of character information or image information.

Claim 99. (*Previously Presented*) The image processing system according to claim 98, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 100. (*Previously Presented*) The recording medium according to claim 52, wherein said predetermined region includes at least one of character information or image information.

Claim 101. (*Previously Presented*) The recording medium according to claim 100, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 102. (*Previously Presented*) The recording medium according to claim 53, wherein said predetermined region include at least one of character information or image information.

Claim 103. (*Previously Presented*) The recording medium according to claim 102, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 104. (*Previously Presented*) The image verifying method according to claim 61, wherein said predetermined region include at least one of character information or image information.

Claim 105. (*Previously Presented*) The image verifying method according to claim 104, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 106. (*Previously Presented*) The image verifying method according to claim 62, wherein said predetermined region includes at least one of character information or image information.

Claim 107. (*Previously Presented*) The image verifying method according to claim 106, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 108. (*Previously Presented*) The image providing apparatus according to claim 44, wherein said predetermined region includes at least one of character information or image information.

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Claim 109. (*Previously Presented*) The image providing apparatus according to claim 108, wherein a density of said digital watermark embedded in a predetermined region comprising character information is smaller than a density of said digital watermark embedded in a predetermined region comprising image information.

Claim 110. (*Previously Presented*) The image processing system according to claim 34, wherein said image processing apparatus further comprises means for storing said document information.

Claim 111. (*Previously Presented*) The image processing system according to claim 35, wherein said image processing apparatus further comprises means for storing said document information.

Claim 112. (*Previously Presented*) The image providing apparatus according to claim 43, further comprising:

means for storing said document information.

Claim 113. (*Previously Presented*) The image providing apparatus according to claim 44, further comprising:

means for storing said document information.

Claim 114. (*Previously Presented*) The recording medium according to claim 52, said program further comprising:

a storing module which stores said document information.

Claim 115. (*Previously Presented*) The recording medium according to claim 53, said program further comprising:

a storing module which stores said document information.

Claim 116. (*Previously Presented*) The image verifying method according to claim 61, further comprising:

storing said document information.

Claim 117. (*Previously Presented*) The image verifying method according to claim 62, further comprising:

storing said document information.

Claim 118. (*Currently Amended*) An image processing system comprising:

an image providing apparatus comprising:

a document identifying unit configured to provide original image data in a plurality of regions, identify at least one predetermined region of the plurality of regions by a document information, and provide the document information which shows an identification of a document classification;

a document format database configured to manage information by receiving the document information and providing a document format information for embedding a digital watermark in the at least one

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predetermined region of the plurality of regions identified by the document information <u>based on the document classification</u>, and

a digital watermark embedding unit configured to form processed image data by embedding the digital watermark in the at least one predetermined region of the plurality of regions according to the document format information, and provide the processed image data; and

an image utilizing apparatus comprising:

a document identifying unit configured to identify the processed image data, and provide the document information identifying the at least one predetermined region of the plurality of regions where the digital watermark is embedded;

a document format database configured to manage information by receiving the document information and providing the document format information for the at least one predetermined region of the plurality of regions where the digital watermark is embedded, and

a digital watermark extracting unit configured to extract the digital watermark embedded in the at least one predetermined region of the plurality of regions according to the document format information, and verify whether any of said processed image data in said predetermined region, in which said digital watermark is embedded, has been tampered.

Claim 119. (*Previously Presented*) An image processing system as claimed in claim 118, wherein said digital watermark extracting unit of the image utilizing apparatus

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is further configured to authenticate the processed image data in the at least one predetermined region by using a watermark key including an authentication information.

Claim 120. (*Previously Presented*) An image processing system as claimed in claim 118, wherein said digital watermark embedding unit of the image providing apparatus is further configured to recognize a format of said original image data, and embed the digital watermark the digital watermark in the at least one predetermined region based on said format, and wherein said digital watermark extracting unit of the image utilizing apparatus is further configured to recognize a format of said processed image data, and verify whether the processed image data in the at least one predetermined region, in which said digital watermark has been embedded, has been tampered.